

WHAT IS CLAIMED IS:

1. A method of terminating and creating a synchronous transport signal, comprising steps of:

5 receiving an inbound synchronous transport signal;
extracting an inbound synchronous payload envelope of the inbound synchronous transport signal;

10 mapping embedded signals within the inbound synchronous payload envelope into an inbound matrix payload envelope format;

15 generating an inbound matrix transport format from the inbound matrix payload envelope format, the inbound matrix transport format carrying embedded signals for cross-connection to appropriate destinations.

2. The method of Claim 1, further comprising:

isolating DS-1 network signals from the inbound synchronous payload envelope;

20 placing the DS-1 network signals into the inbound matrix payload envelope format.

3. The method of Claim 1, further comprising:

generating DS-3 network signals from the inbound synchronous payload envelope;

25 isolating DS-1 network signals from the DS-3 network signals;

placing the DS-1 network signals into the inbound matrix payload envelope format.

4. The method of Claim 2, further comprising:
performing fault isolation on the DS-1 network
signals.

5 5. The method Claim 1, further comprising:
locking the inbound synchronous payload envelope to
a frequency of the inbound synchronous transport signal.

10 6. The method of Claim 1, further comprising:
locking the inbound matrix payload envelope format
to a wideband timebase.

15 7. The method of Claim 1, further comprising:
receiving an outbound matrix transport format and
corresponding clock signals;
converting the outbound matrix transport format into
an outbound matrix payload envelope.

20 8. The method of Claim 7, further comprising:
converting the outbound matrix payload envelope into
an outbound synchronous payload envelope;
generating an outbound clock signal corresponding to
the outbound synchronous payload envelope.

25 9. The method of Claim 8, further comprising:
converting the outbound synchronous payload envelope
into an outbound synchronous transport signal;
generating a network clock signal corresponding to
the outbound synchronous transport signal;
30 transmitting the outbound synchronous transport
signal with the network clock signal.

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10. The method Claim 7, further comprising:
desynchronizing DS-1 network signals from the
outbound matrix payload envelope.

5 11. The method of Claim 10, further comprising:
placing the desynchronized DS-1 network signals into
the outbound matrix payload envelope.

10 12. The method of Claim 10, further comprising:
converting the desynchronized DS-1 signals into
corresponding DS-3 network signals.

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13. A method of terminating and creating a synchronous transport signal, comprising steps of:

receiving an inbound synchronous transport signal;
extracting an inbound synchronous payload envelope
5 from the inbound synchronous transport signal;
mapping the inbound synchronous payload envelope into an inbound synchronous transfer mode signal;
extracting plesiochronous digital hierarchy signals from the inbound synchronous transfer mode signal;
10 placing the plesiochronous digital hierarchy signals into a plurality of channels having a matrix payload envelope signal format;
multiplexing the plurality of channels;
converting the multiplexed plurality of channels
15 into matrix transport signals;
serially transmitting the matrix transport signals.

14. The method of Claim 13, further comprising:
processing lower rate components of the
20 plesiochronous digital hierarchy signals prior to placement into the plurality of channels.

15. The method of Claim 13, further comprising:
processing thirty-four megabit components of the
25 plesiochronous digital hierarchy signals.

16. The method of Claim 13, further comprising:
processing one hundred forty megabit components of the plesiochronous digital hierarchy signals.

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17. The method of Claim 16, further comprising:
demultiplexing and desynchronizing the one hundred
forty megabit components into thirty-four megabit
components.

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18. The method of Claim 13, further comprising:
directly converting the inbound synchronous
transport signals into separate matrix payload envelope
formats;

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multiplexing the separate matrix payload envelope
formats into byte interleaved parallel form.

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19. The method of Claim 13, further comprising:
locking the inbound synchronous payload envelope to
a frequency of the inbound synchronous transport signal.

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20. The method of Claim 13, further comprising:
locking the matrix payload envelope signal format to
a wideband timebase.